

**STATE FOREST LAND
ENVIRONMENTAL CHECKLIST**

Purpose of Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can. *Questions in italics are supplemental to Ecology's standard environmental checklist. They have been added by the DNR to assist in the review of state forest land proposals. Adjacency and landscape/watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at <http://www.dnr.wa.gov> under "SEPA Center." These maps may also be reviewed at the DNR regional office responsible for the proposal. This checklist is to be used for SEPA evaluation of state forest land activities.*

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later. *All of the questions are intended to address the complete proposal as described by your response to question A-11. The proposal acres in question A-11 may cover a larger area than the forest practice application acres, or the actual timber sale acres.*

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer" and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

Timber Sale Name:DRAGON'S BACK SORTS
Agreement #:30-076292
2. Name of applicant: Washington State Department of Natural Resources
3. Address and phone number of applicant and contact person:

Olympic Region
411 Tillicum Lane
Forks, WA 98331

Contact Person: Mark Benner
Telephone: (360) 374-6131
4. Date checklist prepared: 10/19/2004
5. Agency requesting checklist: Washington State Department of Natural Resources
6. Proposed timing or schedule (including phasing, if applicable):

a. Auction Date:05/24/2005

b. Planned contract end date (but may be extended):

c. Phasing:
7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

Timber Sale

- a. Site preparation: Piling and burning of landing debris.
- b. Regeneration Method:

TSU NO :1	HAND PLANT	01/01/2007	56 Acres
TSU NO :2	HAND PLANT	01/01/2007	33 Acres
TSU NO :3	HAND PLANT	01/01/2006	65 Acres
TSU NO :4	HAND PLANT	01/01/2007	48 Acres

Vegetation Management: Treatment needs will be assessed over time.
- c. Thinning: Possible pre-commercial thinning and or commercial thinning.

Roads: Road maintenance including grading, ditch clean out, and repair or replacement of culverts will occur as necessary on existing roads. The roads associated with this proposal will be used for future timber harvest and other management activities.

Rock Pits and/or Sale: The rock for this sale will come from a commercial source.

Other: Future forest management activities are anticipated to continue within the WAU, and adjacent to the current proposal. Potential activities may include but are not limited to firewood salvage, hardwood slashing, maple stump treatment, pre-commercial thinning, commercial thinning and regeneration harvest. These future activities are connected with this proposal insofar as that they will occur in close proximity to the sale area and that the roads constructed or reconstructed under this proposal may be used to perform the required work. All future activities will be consistent with the State's Habitat Conservation Plan (HCP), and applicable policy and planning documents. At this time specific proposals have not been formulated, however some potential areas for future regeneration harvest have been identified as part of a broader scope planning process. These areas are located on parts of Sections 15 and 22, Township 29 North, Range 02 West, W.M. and Section 5, Township 28 North, Range 1 West, W.M. Detailed harvest plans within this area will be dependent upon findings from on site reconnaissance and haul cost analysis.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.
- ☐ 303 (d) – listed water body in WAU: ☐temp ☐sediment ☐completed TMDL (total maximum daily load):

☐Landscape plan:

☐Watershed analysis:

☐Interdisciplinary team (ID Team) report:

☒Road design plan: Dragon’s Back Sorts Road Plan

☒Wildlife report: Eagle Management Plan

☒Geotechnical report:

☒Other specialist report(s):Stream survey notes dated November 3, 2004

☐Memorandum of understanding (sportsmen’s groups, neighborhood associations, tribes, etc.):

☐Rock pit plan:

☒Other: Forest Resource Plan, dated July 1992; State Soil Survey; Habitat Conservation Plan (HCP), dated September 1997; Special Concerns and TRAX Reports

** All documents are available for viewing at the Olympic Region office during the SEPA comment period.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.
No.
10. List any government approvals or permits that will be needed for your proposal, if known.
- ☐HPA ☒Burning permit ☐Shoreline permit ☐Incidental take permit ☒FPA ☒Jefferson County Road Approach Permits

☒Other: Board of Natural Resources approval
11. Give brief, complete description of our proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include specific information on project description.)

a. Complete proposal description:

The Dragon’s Back Sorts proposal consists of five units (one of which is right of way) totaling 206 net acres, four of these acres are right-of-way. The proposal is located in Sections 16 and 27 of Township 29 North, Range 1 West and Sections 13 and 24 of Township 30 North Range 2 West in Jefferson County. Ground and cable methods will be used. The sale design has been shaped by an effort to protect natural resources, including structurally unique trees, streams, wetlands, and wildlife. The initial project planning effort identified 248 acres of land to examine for potential timber harvest. Sale reconnaissance identified 34 acres of the original proposal area to be managed for environmental protection rather than timber harvest. This represents a 17% reduction from the initial acreage. The following exclusions were made for this purpose: Thirty acres of wetland and riparian protection and four acres of unstable slope protection (note that the majority of unstable slopes fall within the RMZ and WMZ.), and eight acres for leave trees.

Sale of Timber:

Estimated volume:	6,225 MBF
Proposal area in acres:	248
Sale area in acres:	214
Type of harvest:	regeneration harvest
Logging system:	Ground based and Cable methods
Landings: Number	12
Total area in acres	1.2 ac(based on a 100’X100’ impacted area)

Roads:

To be constructed (feet)	10,061
To be improved (feet)	2,908 (reconstruction, does not include pre-haul maintenance)
To be maintained(miles)	1.94

Other Related Actions: Any remaining landing debris may be offered as firewood and/or be piled and burned. The sale area will be reforested and vegetation management will be assessed on an on going basis.

b. Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.

This proposal contains stands that fall within the western hemlock vegetation zone (TSHE). The units consists of a mix of Douglas fir, western red cedar, western hemlock, grand fir and big leaf maple ranging in age from 60-120 years old. The average diameter of the Douglas fir in the stand is 18 inches and the western red cedar average diameter is 19 inches, and tree heights run over 109 feet. Stand density (excluding understory initiation) is approximated at 159 trees per acre with a canopy closure of 80%. Stand defect is observed in the form of patches of phellinus root rot found scattered throughout the proposal area. This proposal will be harvested as an even-aged regeneration cut. All the units will employ ground-yarding methods and Units 2 and 3 also have cable yarding methods. Ground method limitations vary by unit and cable methods can occur year-round.

The overall unit objectives for this proposal are multifaceted. This sale is being sold using direct marketing in an effort to maximize the revenue potential to the trust beneficiaries while protecting ecological values. This includes: maintaining trees of unique structural characteristics such as old residual Douglas fir and western red cedar; protecting soil productivity and slope stability; protecting Type 4 and 5 streams; protecting forested wetlands; managing wildlife habitat for Eagles; and evaluating the use of a road system that will most efficiently serve management needs while minimizing long term road impacts. Objectives also include reforesting the area to a well-stocked condition.

c. Road activity summary. See also forest practice application (FPA) for maps and more details.

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		10,061	2.8	0
Reconstruction		2,908		0
Abandonment		0	0	0
Bridge Install/Replace	0			0
Culvert Install/Replace (fish)	0			0
Culvert Install/Replace (no fish)	31			

12. Location of proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. (See timber sale map. See also color landscape/WAU map on the DNR website <http://www.dnr.wa.gov> under “SEPA Center.”)

a. Legal description:

T29N R1W S16
T29N R1W S27
T30N R2W S13
T30N R2W S24

b. Distance and direction from nearest town (include road names):

Unit 1: From Chimacum turn onto West Valley Road, travel 3.1 miles to Beausite Lake Rd.
Unit 2 and 3: From Chimacum turn onto West Valley Road, travel 1 mile to Van Trojan Road. Travel .7 miles up Van Trojan Road to the PT-V-1000. Travel 2.5 miles on the PT-V-1000 to the right-of –way signs headed north.
Unit 4: From Port Townsend travel 5 miles on Hastings Road, to Cape George from there travel 2.5 miles south.

c. Identify the watershed administrative unit (WAU), the WAU Sub-basin(s), and acres. (See also landscape/WAU map on DNR website <http://www.dnr.wa.gov> under “ SEPA Center.”)

WAU Name	WAU Acres	Proposal Acres
DISCOVERY BAY	60700	150
CHIMAKUM	29494	56

13. Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website <http://www.dnr.wa.gov> under “SEPA Center” for a broader landscape perspective.)

The Discovery Bay WAU consists of 60,700 acres of mixed ownership lands. DNR managed lands represent 12% of the total land base within the WAU. The current stand conditions on State land within the WAU reflect 33% in the 0-24 year age class, and 67% in the 25+ year category. These age classes were selected to reflect upon what is considered hydrologically mature. Completion of this proposal and other planned and active sales in the WAU would shift this number to 38% and 62% respectively. This is based on 2002 data updated for sold sales from 2002 to 2004 and does not take into account the stands that have matured into the 25-year-old threshold since 2002, or that will cross over into this age class during the expected contract term. Future timber harvest activity in the surrounding landscape is anticipated to continue on State land. At this time specific proposals have not been formulated, however some potential areas for future regeneration harvest have been identified as part of a broader scope planning process. These areas are located on parts of Sections 15 and 22, Township 29 North, Range 02 West, W.M.

The proposal is in the eastern portion of the Discovery Bay WAU. The WAU consists of the eastern portion of the Miller Peninsula, the western portion of the Quimper Peninsula and south to approximately Little Skidder Hill. The southern portion of the WAU is a mix of large landowner and larger residential tracts.

The Chimakum WAU consists of 29,494 acres of mixed ownership lands. DNR managed lands represent 5% of the total land base within the WAU. The current stand conditions on State land within the WAU reflect 44% in the 0-24 year age class and 56% in the 25+ year category. These age classes were selected to reflect upon what is considered hydrologically mature. Completion of this proposal in the WAU would shift this number to 48% and 58% respectively. This is based on 2004 data updated for sold sales, and did not take in to account the stands that will cross over into the 25+ age class during the expected contract term. Future timber harvest activity in the surrounding landscape is anticipated to continue on State land. At this time specific proposals have not been formulated, however some potential areas for future regeneration harvest have been identified as part of a broader scope planning process. These areas are located on parts of Section 16, Township 28 North, Range 1 West, W.M.

The proposal is in the southwest portion of the Chimakum WAU. The WAU consists of the Beaver Valley and Center Valley drainages which each have a fork of Chimacum Creek. The surrounding landscape is smaller residential tracts with larger ownerships by Pope Resources, State Lands, Jefferson County and State Parks. The two creek valleys have traditionally and currently are used for dairy farming.

Additional known activities in the Chimakum WAU is a 2005 timber sale which will harvest 13 acres. This sale is in preliminary planning stages.

All current and future activities will be conducted according to the State’s HCP, Forest Resource Plan, and State Forest Practices Rules, and are expected to mitigate for any potential adverse cumulative effects. Dispersed and clumped leave trees will provide structure for many wildlife species to use, and reduce the visual impacts of the harvest. The density of leave trees will average eight trees per acre for the proposal area. Snags and down wood will also be provided. Assessments have been performed to evaluate the potential use of the proposal area by threatened and endangered species, and by species of concern. The result of these assessments has been the development of an Eagle Management Plan that will meet the needs of the Bald Eagles near Units 1 and 4. Road network planning and road design have been performed in order to minimize the amount of road construction needed and to ensure the quality of existing and newly constructed roads. Timing restrictions on road construction will help to maintain the integrity of existing roads and reduce the potential for off site movement of sediments. Ground yarding operations shall be suspended during periods of severe wet soil conditions when rutting of skid roads begins. The use of cable, shovel and tracked yarding equipment and associated timing restrictions will help to prevent rutting, minimize soil disturbance, and protect water resources. Unstable slopes were identified in the drainage between Units 2 and 3. Most of the unstable areas fell within the RMZ, so are excluded, but in the northeast portion of Unit 2 a relict deep-seated landslide is included in the harvest area. The DNR geologist visited the area and found the deep-seated landslide relict with no evidence suggesting that timber harvest would adversely impact the stability.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (check one):

☐Flat, ☒Rolling, ☐Hilly, ☐Steep Slopes, ☐Mountainous, ☐Other:

1) General description of the WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone).

The Discovery Bay WAU is located on the Olympic Peninsula along the Strait of Juan De Fuca. There are 60,658 acres total and DNR ownership makes up 12% of the land base in the WAU. The elevation range is in transition from the lower, rolling topography, to the foothills of the steeper mountainous terrain. The north half of the WAU is made up of relatively flat low elevation lands in use as rural residential, agriculture, and commercial forest. The south half exhibits mostly forestlands, of which the USFS is the largest landowner. The maximum elevation is 4,196 feet at the top of the watershed on national forest land. The steeper slopes in the WAU are found in the southern half, with the exception of the 50 –150 foot bluffs along the Strait. The lower elevations have generally more gentle slopes with more intense land use patterns. The entire WAU is within the Olympic rain shadow and receives annual precipitation ranging from less than 20 inches on 43% of the land to a maximum 45 inches on 1 % of the acreage. Forests have extensive burn history throughout the WAU with fire return intervals among the lowest in western Washington. The dominant forest type is Douglas fir with associated western red cedar, western hemlock, grand fir, red alder, bigleaf maple, pacific madrone and bitter cherry. The managed forestlands are primarily regenerated with Douglas fir and red alder. This proposal falls within the western hemlock vegetation zone (TSHE).

The Chimakum WAU is located on the Olympic Peninsula where the Strait of Juan De Fuca and Puget Sound intersect. There are 29,494 acres total and DNR ownership makes up 5% of the land base in the WAU. The elevation range is in transition from valley bottoms to the rolling hills in the southern portion. The WAU is made up of relatively flat, low elevation lands use as rural residential, agriculture and commercial forest. The maximum elevation is 782 feet at the top to 0 at the saltwater. The entire WAU is within the Olympic rain shadow and receives annual precipitation ranging from 20 inches on 34% of the land to a maximum 35 inches on 10 % of the acreage. Forests have extensive burn history throughout the WAU with fire return intervals among the lowest in western Washington. The dominant forest type is Douglas fir with associated western red cedar, western hemlock, grand fir, red alder, bigleaf maple, pacific madrone and bitter cherry. The managed forestlands are primarily regenerated with Douglas fir and red alder. This proposal falls within the western hemlock vegetation zone (TSHE).

2) Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).

In the Discovery WAU the proposal is in the lower elevations. In the Chimakum WAU the proposal is in the mid elevation ranges.

b. What is the steepest slope on the site (approximate percent slope)?

The steepest slope on the site is in Unit 2, this measures 35%.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. *Note: The following table is created from state soil survey data. It is a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. It can help indicate potential for shallow, rapid soil movement, but often does not represent deeper soil sub-strata. The actual soils conditions in the sale area may vary considerably based on land-form shapes, presence of erosive situations, and other factors. The state soil survey is a compilation of various surveys with different standards.*

State Soil Survey #	Soil Texture or Soil Complex Name	% Slope	Acres	Mass Wasting Potential	Erosion Potential
0056	Alderwood	0-15	78	INSIGNIFICANT	LOW
0064	Alderwood	15-30	61	INSIGNIFICANT	LOW
0048	Alderwood	0-15	1	INSIGNIFICANT	LOW
1112	Clallam	0-15	24	INSIGNIFICANT	LOW
0467	BEAUSITE-ALDERWOOD-COMPLEX	15-30	10	No Data	No Data
0463	Beausite	15-30	6	INSIGNIFICANT	LOW
0953	CASSOLARY-EVERETT-COMPLEX	0-15	9	No Data	No Data
8183	Tukey	0-15	24	INSIGNIFICANT	LOW
3920	Kitsap	0-15	1	LOW	LOW

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

1) *Surface indications:*

The Type 5 just outside the eastern portion of Unit 2 shows small earthfalls and debris flows. Also near Unit 2 below the eastern boundary are very steep slopes approximately 90-100 percent, located south of the Type 5. North of the Type 5 is a relict deep-seated slump. All areas of concern have been excluded from the unit as suggested by the DNR geologist.

2) *Is there evidence of natural slope failures in the sub-basin(s)?*

☐No ☒Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:

Natural slope failures occur within incised draws and gorges where streams undercut the toe of the slope, causing some slides to begin. Slope failures also occur on steep slopes underlain by unstable, glacial soils during periods of extreme saturation. Both of these conditions exist within the steeper gorge area of the Snow Creek drainage, located in Sections 10 and 11 of Township 28 North, Range 2 West, W.M. These failures are shallow-rapid in nature and can be viewed throughout the Snow Creek drainage and some of its tributaries in this area. Deep-seated failures occur on over steepened bluffs along the shorelines of the Strait of Juan De Fuca and the Puget Sound where the tidal action has eroded the toe of the slope.

3) *Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?*

☐No ☒Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:

Associated management activity:

Slope failures have occurred where timber harvest and road construction has been performed on extremely steep unstable slopes. Road failures are primarily associated with older, poorly constructed sidecast roads.

4) *Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?*

☒No ☐Yes, describe similarities between the conditions and activities on these sites:

No. Deeply incised drainages are found in proximity to Unit 2, but have been excluded from the sale. The mass wasting potential is listed as insignificant to low on the proposal and the erosion potential is low. A DNR geologist has examined the proposed sale area and areas of concern for potential slope instability were removed from the proposal.

5) *Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal.*

All areas of concern will be excluded from the proposal. Ditch water is to be diverted onto stable locations on the forest floor and the installation of sufficient cross drains will maintain natural drainage patterns.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Approx. acreage new roads: 2.7 Approx. acreage new landings: 1.2

Fill source: On site native material, glacial gravel from privately owned pit, privately owned commercial rock source. Rock quantities are 9559 cubic yards.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

A small amount of surface erosion incidental to freshly exposed soils is anticipated.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? *Approximate percent of proposal in permanent road running surface (includes gravel roads):*

1.8% of the sale area will be in permanent road running surface as defined by compacted pit run ballast or crushed surfacing. This is based on a 12 ft running surface on newly constructed roads, and a 100 ft X 100 ft rocked landing area.

h. Propose measures to reduce or control erosion, or other impacts to the earth, if any:

(Include protection measures for minimizing compaction or rutting.)

Roads will be constructed with properly located ditches, ditchouts and cross drains to divert water onto stable forest floor and/or into stable natural drainages. Road reconstruction, construction and rock haul will be restricted from November 1st to April 30th, when the potential for erosion and sediment movement is at its peak. Units 1, 2, and 3 limit ground equipment from November 1st to April 30th. Cable yarding can occur year round but is subject to suspension during periods of wet weather or wet soil conditions.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust from truck traffic, rock mining, crushing or hauling, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Insignificant amounts of engine exhaust from logging equipment and dust from passage of log trucks. Logging slash, if burned, will be burned adhering to the State's smoke management plan.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

None.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

None.

3. Water

a. Surface:

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. (See timber sale map and forest practice base maps.)
- Unit 1 has no typed water.
- Unit 2 has a 1.17 acre wetland centrally located in the unit. A Type 5 stream drains the wetland to the east and feeds into a Type 4 stream that divides Units 2 and 3. There is also a Type 4 stream along the north. The Type 4 stream to the north has two less than ¼ acre forested wetland associated. Waters from Unit 2 flow into Discovery Bay.
- Unit 3 has a Type A wetland to the north on private property. Flowing from this Type A wetland is a Type 4 stream that parallels the north boundary. In the eastern portion of the unit a Type 5 bisects the sale and feeds into another Type 5 stream. Waters from Unit 3 are tributary to Discovery Bay.
- Unit 4 has no typed streams associated with the sale area but does have two less than a ¼ acre forested wetlands in the southwest portion.

a) Downstream water bodies:

The water in Unit 1 contributes to Chimacum Creek. The waters in Unit 2-4 contribute to Discovery Bay.

b) Complete the following riparian & wetland management zone table:

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (how many?)	Avg RMZ/WMZ Width in Feet (per side for streams)
Forested wetlands <.25 acre in size	N/A	8	Leave tree s remain around the perimeter
Forested wetlands >1.0 ac	N/A	1	150
Type A wetland	N/A	1	150
stream	5/Ns	3	2 are in WMZ, 1 has trees along perimeter(approx. 25 feet either side)
stream	4/Np	2	100

- c) List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers.
- The Type 4 streams are buffered by 100 feet. Within one of the Type 4 stream buffers four corridors for yarding will be needed and full suspension of the logs is required. The corridor size will be a maximum of 10 feet and any trees that need to be felled will be left in the corridor. Two of the Type 5 streams are contained within the Wetland Management Zone (WMZ) of the greater than one acre wetland and in the perimeter of a less than 1/4 acre wetland. The Type A wetland (most of which is on private land) is buffered by 150 feet. The greater than one acre forested wetland is buffered by an average 150 feet. The wetland buffer is an average 150 feet on the west side of the wetland because the buffer was shortened to 50 feet and lengthened on the north to 250 feet to allow for cable corridors. The less than 1/4 acre wetlands have leave trees remaining around the perimeter. No wind buffers where applied.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) to the described waters? If yes, please describe and attach available plans.
☐No ☒Yes (See RMZ/WMZ table above and timber sale map.)
Description (include culverts):
- Harvest operations will occur within 200 ft of the wetlands and streams. There will be no activity within the WMZ's. Over one of the Type 4 streams yarding corridors will be cut to allow the yarding of trees across the stream. There will be a maximum of four corridors allowed. The corridors will be a maximum of 10 feet wide and if any trees need to be cut they will be left in the corridor. The sale was designed to yard across the stream rather than to build substantially more road with a stream crossing to access the some ground. Also, tailholding may occur in the Type 4 buffer. No trees will be harvested within the RMZs. Contract language will require that no equipment may operate within the protective leave tree areas around the forested wetlands, or within the RMZs or WMZs, with the exception of the yarding corridors and the tailholds within the Type 4 buffer.
- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.
- None.
- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. (Include diversions for fish-passage culvert installation.)
☒No ☐Yes, description:

- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
☒No ☐Yes, describe location:
- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
☒No ☐Yes, type and volume:
- 7) *Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?*
- It is possible that surface erosion is occurring in areas as described in Part B.1.d.2. The GIS database shows that only two percent of the soils in the Discovery Bay WAU and only four percent of the soils in the Chimakum WAU have medium to high surface erosion and mass wasting potential. Soils reports also indicate that the soil types present within the boundaries of this proposal have low erosion potential. Based on the sale design, off site movement of sediment should be minimal.
- 8) *Is there evidence of changes to the channels in the WAU and sub-basin(s) due to surface erosion or mass wasting (accelerated aggradations, erosion, decrease in large organic debris (LOD), change in channel dimensions)?*
☐No ☒Yes, describe changes and possible causes:
- There are some channels in the WAU which show evidence of accelerated aggradations due to a combination of factors including surface erosion, slides and increased peak flows. These changes are attributed to both natural events and human activity and occur throughout the reach of some streams in the WAUs. For proposal specifics see part B.1.d.1-5.
- 9) *Could this proposal affect water quality based on the answers to the questions 1-8 above?*
☐No ☒Yes, explain:
- A small increase in surface runoff is anticipated. Runoff is expected to return to preharvest conditions relative to this proposal within 25 years. Given the topography, soil types and protective measures being taken, this proposal should have little affect on stream and water quality.*
- 10) *What are the approximate road miles per square mile in the WAU and sub-basin(s)?*
- The G.I.S. database indicates that there are 4.4 miles of road per square mile in the Discovery Bay WAU and 4.4 miles in the Chimakum WAU. No sub basin data is available
- Are you aware of areas where forest roads or road ditches intercept sub-surface flow and deliver surface water to streams, rather than back to the forest floor?*
☒No ☐Yes, describe:
- There are likely cases where this has occurred elsewhere in the WAU.
- 11) *Is the proposal within a significant rain-on-snow (ROS) zone? If not, **STOP HERE** and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.*
☒No ☐Yes, approximate percent of WAU in significant ROS zone.
Approximate percent of sub-basin(s):
- 12) *If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?*
- 13) *Is there evidence of changes to channels associated with peak flows in the WAU or sub-basin(s)?*
☐No ☒Yes, describe observations:
- There have been increases in peak flows associated with small drainage basins that contain a high percentage of young (less than 25 years old) timber which have created channel scouring. Specific instances of this occurring were not identified directly adjacent to the proposed timber sale units. The closest example would be some basins within the reach of the Salmon Creek sub-basin.
- 14) *Based on your answers to questions B-3-a-10 through B-3-a-13 above, describe whether and how this proposal, in combination with other past, current, or reasonably foreseeable proposals in the WAU and sub-basin(s), may contribute to a peak flow impact.*
- A small increase in peak flow is anticipated as a result of this proposal. Negative impacts are not anticipated based on the following: the size of the harvest area in relation to the acreage contained within the WAUs and sub-basins, the ability of the proposed harvest area (and surrounding forest land) to regain hydrologic maturity through time, the buffering effects of riparian and wetland management zones and the wide distribution of the sale units throughout the WAUs. All current and future activities will be conducted according to the State's HCP and are expected to mitigate for any potential adverse cumulative effects.
- 15) *Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?*
☐No ☒Yes, possible impacts:
- From Unit 1 there are three surface water rights registered and one ground water right registered with the Department of Ecology that are potentially located downstream of this proposal. Three are located in Section 27 and one in Section 22, of Township 29 North, Range 1 West, W.M.
From Units 2 and 3 there are two ground water rights registered with the Department of Ecology that are potentially located downstream of this proposal. One is located in Section 8 and one in Section 9, of Township 29 North, Range 1 West, W.M.

From Unit 4 there are no rights registered with the Department of Ecology that are potentially located downstream of this proposal.
There is not enough information provided in the Special Concerns Report to determine the exact locations of any of the registered water rights.

- 16) *Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts.*

Road network planning and road design have been performed in order to minimize the amount of road construction needed and to ensure the quality of existing and newly constructed roads. The spatial forest cover analysis was examined to ensure adherence to current policy on hydrologic maturity within two WAUs boundaries. G.I.S landscape reports were checked to evaluate the location of this proposal relative to the rain-on-snow zone-mapping units. The overall sale design will also help to minimize impacts as noted by the difference in net sale acreage relative to the proposal area acreage that was initially considered for harvest. Seventeen percent of the proposal area has been identified for protection of streams, wetlands, and unstable slopes. This represents a substantial reduction in the harvestable land base with respect to the immediate landscape associated with this proposal. Prompt reforestation will initiate a move towards the recovery of hydrologic maturity.

b. Ground Water:

- 1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

No.
- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Does not apply.
- 3) *Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?*
☐No ☒Yes, describe:

There are groundwater rights registered with the Department of Ecology Within the vicinity of Unit 1 there is one ground water right registered with the Department of Ecology that is potentially located downstream of this proposal. It is located in Section 22 of Township 29 North, Range 1 West, W.M. From Units 2 and 3 there are two ground water rights registered with the Department of Ecology that are potentially located downstream of this proposal. One is located in Section 8 and one in Section 9, of Township 29 North, Range 1 West, W.M.

There is not enough information provided in the Special Concerns Report to determine the exact locations.

A small increase in groundwater volume is anticipated during peak storm events. There is a potential for some increase in water yield downstream of the proposal. Based on the factors described in parts B.3.a.9. and B.3.a.14, negative impacts resulting from increased flows are not anticipated.

- a) *Note protection measures, if any.*

See B.3.a.15 & 16 above.

c. Water Runoff (including storm water):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Storm water will be collected by ditches, ditchouts and cross drains and diverted to stable forest floor material.
- 2) Could waste materials enter ground or surface waters? If so, generally describe.

Does not apply.
- a) *Note protection measures, if any.*

- d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:
(See surface water, ground water, and water runoff sections above, questions B-3-a-1-c, B-3-a-16, B-3-b-3-a, and B-3-c-2-a.)

Also see B.1.h. and B.3.c.1 above. Yarding equipment restrictions and timing restrictions for roadwork will reduce the potential for off site movement of sediment during the period of late fall through early spring when surface runoff is at its peak. The sale design, including harvest system design and road construction considerations, should maintain natural flow patterns.

4. Plants

- a. Check or circle types of vegetation found on the site:

☒deciduous tree: ☒alder, ☒maple, ☐aspen, ☐cottonwood, ☐western larch, ☐birch, ☒other: Bitter Cherry
☒evergreen tree: ☒Douglas fir, ☒grand fir, ☐Pacific silver fir, ☐ponderosa pine, ☐lodgepole pine,
☒western hemlock, ☐mountain hemlock, ☐Englemann spruce, ☐Sitka spruce,

☒red cedar, ☐yellow cedar, ☒other: Pacific Madrone
☒shrubs: ☒huckleberry, ☒salmonberry, ☒salal, ☒other: Oceanspray, Rhododendron
☐grass
☐pasture
☐crop or grain
☒wet soil plants: ☐cattail, ☐buttercup, ☐bullrush, ☒skunk cabbage, ☐devil’s club, ☐other:
☐water plants: ☐water lily, ☐eelgrass, ☐milfoil, ☐other:
☐other types of vegetation:
☐plant communities of concern:

b. What kind and amount of vegetation will be removed or altered? (See answers to questions A-11-a, A-11-b, B-3-a-1-b and B-3-a-1-c. The following sub-questions merely supplement those answers.)

This proposal involves harvesting 206 net acres of 60-120 year old mixed species heavy to Douglas fir and western red cedar, with varying amounts of western hemlock, grand fir, and bigleaf maple. The species composition will not be significantly changed in the WAUs, as the area will be reforested with similar species. A minimum of eight trees per acre will be left scattered and clumped to provide structure for wildlife use. Leave trees include at least two trees per acre of the largest trees on site. Defective trees that have been identified as valuable for wildlife have also been left. In identifying these trees, a number of very large trees were found. Approximately 6,225 mbf of timber will be removed. Most of the conifer and deciduous trees will be harvested, with the exception of those left distributed throughout the sale area for wildlife purposes. Shrub and herbaceous plants will be disturbed during logging, however most species will recover and respond favorably to the increase in available sunlight. There will be a transition from more shade tolerant species to intolerant species.

1) Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See landscape/WAU and adjacency maps on the DNR website at: <http://www.dnr.wa.gov> under “SEPA Center.”)

Unit 1: To the north is private property that is standing timber with openings for residences. To the east is private property that is currently being selectively logged. To the south is standing timber part privately owned and the other DNR managed. To the west is DNR managed timber logged in 1989.
Unit2: To the north is private property with approximately 25 year old timber. To the east is a Type 4 stream with a 100 foot buffer. To the south is DNR managed timber approximately 80 years old. To the west is BPA powerline right-of-way.
Unit 3: To the north is private property with timber approximately 25 years old. To the east is DNR managed land logged in 1996. To the south is DNR managed timber approximately 80 years old. To the west is a Type 4 stream with a 100 foot buffer
Unit 4: To the north is DNR managed land logged to 10 trees per acre in 1987. In the middle north is DNR managed land logged in 1993. To the east is Cape George Road (county) and also along that edge is DNR managed timber logged in 1965. To the south is Cape George Road (county) and DNR managed mature timber. To the west is private property with residences.

2) Retention tree plan:

Unit 1 has 380 individually painted trees and 81 trees in three clumps. The individual trees are residual old growth and second growth left for visual mitigation along the two county roads within and adjacent to the sale area. Unit 2 has 57 individually painted trees and 246 trees in six clumps. Unit 3 has 70 individually painted trees and 470 in six clumps. The leave clumps in these units were left as protection for non-required water resources and some visual mitigation. The individuals are residual old growth and structurally unique trees. Unit 4 has 112 individually painted trees and 321 in ten clumps. The leave tree clumps in this unit were left along the county road as visual mitigation and protection of sensitive areas.

c. List threatened or endangered plant species known to be on or near the site.

TSU Number	FMU_ID	Common Name	Federal Listing Status	WA State Listing Status
None Found in Database Search				

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

None.

5. Animal

a. Circle or check any birds animals or unique habitats which have been observed on or near the site or are known to be on or near the site:

birds: ☒hawk, ☐heron, ☒eagle, ☒songbirds, ☐pigeon, ☐other:
mammals: ☒deer, ☒bear, ☐elk, ☐beaver, ☐other:
fish: ☐bass, ☐salmon, ☐trout, ☐herring, ☐shellfish, ☐other:
unique habitats: ☐talus slopes, ☐caves, ☐cliffs, ☐oak woodlands, ☐balds, ☐mineral springs

b. List any threatened or endangered species known to be on or near the site (include federal- and state-listed species).

TSU Number	FMU_ID	Common Name	Federal Listing Status	WA State Listing Status
1	5911	BALD EAGLE	THREATENED	THREATENED
4	43561	BALD EAGLE	THREATENED	THREATENED

Two other threatened species, Chinook Salmon (Puget Sound Run) and Chum Salmon (Hood Canal Summer Run) are known to be within the WAUs for this proposal.

The proposal falls within two ESU’s with threatened salmon stocks. These listed runs are the Chinook salmon in Puget Sound and the Chum Salmon Hood Canal Summer Run. It is anticipated that the riparian zone strategies under the HCP will provide for the water quality needs of these species.

The sale has been screened for spotted owls and is not located within any spotted owl circles nor does it contain any reclassified marbled murrelet habitat.

- c. Is the site part of a migration route? If so, explain.
☒Pacific flyway ☐Other migration route: Explain if any boxes checked:

Washington is considered part of the Pacific flyway, no migratory birds where seen during the time on the proposal.

- d. Proposed measures to preserve or enhance wildlife, if any:

1) Note existing or proposed protection measures, if any, for the complete proposal described in question A-11.

Species /Habitat: Eagle

Protection Measures: All affected units of this sale are outside the 800 foot radius from the nest site that is required to be protected. Many large dominant trees were found scattered throughout the proposed unit. 619 of these trees were marked to be left as individual dispersed trees and 1118 will be left in clumps. These leave trees should help provide for future habitat needs for eagles.

Species /Habitat:
Species /Habitat:

Protection Measures:
Protection Measures:

6. Energy and Natural Resources

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project’s energy needs? Describe whether it will be used for heating, manufacturing, etc.

Does not apply.
- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

Does not apply.
- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Does not apply.

7. Environmental Health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

The operating of heavy machinery will pose a minimal level of hazard. Harvest operations will increase the risk of fire for a period of time. Contract language and State burning rules will require operations to be performed in a manner that will reduce the risk of fire. Fire suppression tools and equipment will be made readily available on site. Slash pullback hazard abatement will be required along all county roads and where residences are 200 feet from the state property line.

1) Describe special emergency services that might be required.

Does not apply.
- 2) Proposed measures to reduce or control environmental health hazards, if any:

Hazard abatement will be required along the east boundary of Unit 1 in proximity to West Valley Road and Beausite Lake Road and a private residence in the northeast corner. Also in Unit 4 along Cape George Road and a private residence in the southwest corner. Contract language will require that preventative measures be taken to avoid on site disposal, or spilling of hazardous materials. The reporting and cleanup of any spills of petroleum based products or other waste will also be required. Also santi-cans will be required for Unit 1 and Unit 4.
- b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None.
- 2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site.

Noise will be created from chainsaws, heavy equipment and log truck traffic during daylight hours while the sale is active.
- 3) Proposed measures to reduce or control noise impacts, if any:

Falling and yarding will not be permitted on weekends and State recognized holidays prior to 6 AM and after 8 PM in Units 1 and 4.

8. Land and Shoreline Use

- a. What is the current use of the site and adjacent properties? *(Site includes the complete proposal, e.g. rock pits and access roads.)*

The current use for the site is timber production. Unit 1 is timbered to the north with residences, the east is private partial cut timber, the south is residence with pasture and the west is State managed timber and timber owned by Jefferson County Units 2 and 3 have private small landowners to the west and State managed timber on all sides but the north. The north side is neighboring Anderson Lake State Park. Unit 4 is surrounded by DNR managed lands on all sides but the west, which is five acre parcels.
- b. Has the site been used for agriculture? If so, describe.

No.
- c. Describe any structures on the site.

None.
- d. Will any structures be demolished? If so, what?

No.
- e. What is the current zoning classification of the site?

Unit 4 and the east portion of Unit 1 is zoned rural resident 1:20. The western portion of Unit 1 and Unit 2 and 3 are zoned commercial forest.
- f. What is the current comprehensive plan designation of the site?

Unit 4 and the east portion of Unit 1 is zoned rural resident 1:20. The western portion of Unit 1 and Unit 2 and 3 are zoned commercial forest
- g. If applicable, what is the current shoreline master program designation of the site?

Does not apply.
- h. Has any part of the site been classified as an “environmentally sensitive” area? If so, specify.

No.
- i. Approximately how many people would reside or work in the completed project?

None.
- j. Approximately how many people would the completed project displace?

None.
- k. Proposed measures to avoid or reduce displacement impacts, if any:

None.
- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Proposed activities are compatible with land use designations.

9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None.
- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.
- c. Proposed measures to reduce or control housing impacts, if any:

None.

10. Aesthetics

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principle exterior building material(s) proposed?
Does not apply.
- b. What views in the immediate vicinity would be altered or obstructed?

1) *Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?*
☐No ☒Yes, viewing location: *A majority of the sale area will be temporarily void of timber until regeneration is established. Unit 1 is along a county road, Beausite Lake Road, this road is access to a parcel owned by Jefferson county. The parcel is leased by the Kiwanis club and is a recreation site. Portions of Units 2 and 3 are visible from Anderson Lake State Park. Unit 4 is near a residential area and along a county road, Cape George Road.*

- 2) *Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?*
☐No ☒Yes, scenic corridor name: *Unit 1 will be visible from county roads, Beausite Lake Road and West Valley Road. Unit 2 will be visible from Highway 20 for a very short time and visible from Anderson Lake Road a county road. Unit 3 will be visible from the county road, Anderson Lake. Unit 4 will be visible from Cape George Road, a county road.*
- 3) *How will this proposal affect any views described in 1) or 2) above? The views in Unit 1 will be in the immediate foreground for Beausite Lake Road and West Valley Road. The views for Unit 2 and Unit 3 will be in the foreground for Anderson Lake Road and from Highway 20 in the background. The view for Unit 4 will be in the immediate foreground from Cape George Road.*

c. Proposed measures to reduce or control aesthetic impacts, if any:

On all units thought was given to visual management. On those areas that are visible, dispersed and group retention of leave trees will help break up the outlines of the even aged harvest. Prompt reforestation will limit the length of time the harvest area will be visible.

11. Light and Glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None.

- b. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

- c. What existing off-site sources of light or glare may affect your proposal?

None.

- d. Proposed measures to reduce or control light and glare impacts, if any:

None.

12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity?

There are informal opportunities for hiking, bird watching, and hunting. Logging roads are also used for mountain bike riding and horseback riding.

- b. Would the proposed project displace any existing recreational uses? If so, describe:

Yes, the proposal would temporarily displace some recreational activity. The area will not be available to recreational use during harvest activity. Permanent displacement of these uses is not anticipated.

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

No measures will be taken since impacts are thought to be minimal. The new roads to be constructed as part of this proposal will probably be used for informal recreation.

13. Historic and Cultural Preservation

- a. Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

A check of DNR's TRAX system indicates that there are no known places or objects. But within the proposal a trash deposit was discovered, the DNR's archeologist was consulted and the site will be recorded with the State.

- b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

A trash deposit was found within the proposal.

- c. Proposed measures to reduce or control impacts, if any:

(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.)

The DNR archeologist was consulted and a site plan will be followed which includes not allowing logging equipment within the boundaries of the trash deposit .

14. Transportation

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

Unit 1 is accessed via two county road, Beausite Lake and West Valley roads. Units 2 and 3 are accessed via Van Trojan and West Valley Road, both county roads. Unit 4 is accessed using Cape George Road, a county road. All of the timber will eventually use U.S. Highway 20, U.S. Highway 104 and/or U.S. Highway 101.

No. The transportation system is designed to accommodate heavy commercial truck traffic. The forest roads were designed to accommodate commercial timber extraction and the sale will be consistent with past levels of use.

No.

None.

This proposal involves 10,061 feet of new logging road, 2,908 feet of reconstruction and 1.94 miles of existing road maintenance. Work to be performed will include roadside brushing, ditch work, application of surfacing, grading, culvert placement and excavation.

The roads for this proposal have been planned as part of a larger transportation network to serve future management needs in the area. Such planning will provide for efficient use of the road system and eliminate unnecessary road construction.

No.

A minor number of trips will be generated in association with normal land management activities.

The access to Units 2 and 3 currently has a gate, so this will control motorized use of the area. Unit 4 will have a gate installed with the proposal to limit motorized traffic.

No.

None.

None.

None.

Completed by: Cindi Tonasket Forester 1 Date: Nov. 15, 2004
Title